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HANDBOOK FOR 1898

• • • OF • • •

**MINNESOTA CHILD-STUDY
ASSOCIATION.**

• • • • •

EDITED BY THE SECRETARY,
STUART H. ROWE.

HANDBOOK
OF THE
MINNESOTA CHILD-STUDY
ASSOCIATION
FOR THE YEAR
1898,
CONTAINING
STUDY OF RESULTS
FROM
IMPORTANT INVESTIGATIONS.

PRINTED BY THE ASSOCIATION FOR THE USE
OF MEMBERS.

PRICE TO THOSE NOT MEMBERS, TWENTY CENTS.

MANKATO, MINN.:
FREE PRESS PRINTING COMPANY,
1898.



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1896

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Our Association and Its Future.

STUART H. ROWE, PH. D.

The constitution, by-laws, conditions, etc., of our Association and its history up to July first of last year have been admirably set forth in our Handbook for 1897, a copy of which should be in the hands of every Minnesota student of children. Since the issue of that Handbook, the Child-Study Congress of last year was held with large audiences, and the December number of "School Education," which was largely devoted to the proceedings of the Child-Study Association at its summer session, has been issued. At the meeting of the State Educational Association held at St. Paul last Christmas vacation, the Child-Study section received its due share of prominence, and the papers read at that time will be found in the printed proceedings of the State Association, extra copies of which may be secured by applying to Supt. J. D. Bond, St. Paul, Minn., at the price of ten cents for postage. At this meeting of our Association, the following officers were elected: Miss Isabel Lawrence, president; Stuart H. Rowe, secretary-treasurer, and Supt. E. G. Adams, director for three years in the place of Miss Ellis. The papers of Miss Darrah, Dr. Beard, Supt. Adams, Mrs. J. D. Engle, and others were enthusiastically received.

Three circular letters have been sent out to different classes of members this year calling their attention to the liberal reductions offered by various Child-Study publications to members of our Child-Study Association, and also reminding them of the fact that their fees for the year were due. These letters together with some personal effort on the part of the president, secretary and others have brought in about 125 members, a good showing, considering that no member-

ships were taken during the meetings at St. Paul. It is confidently expected that this number will be doubled before the next meeting.

Mr. Kirkpatrick, in his report for the year 1897, said:

“It is becoming clear that few parents and teachers are prepared to study children scientifically, and, hence, that the Association should not attempt to provide for a great deal of scientific investigation. On the other hand, nothing is proving more helpful to the cause of education than the increased interest and knowledge of child nature brought about by Child-Study meetings and literature. The association, therefore, should aim to secure more parents as members, and promote as far as possible the holding of parent's and teacher's meetings for the discussion of questions of common interest.”

It was with this idea in mind that the Handbook for 1897 was published,—to furnish a general knowledge of the scope and suggestiveness of Child-Study, to lead to the study of the child, whether scientifically or tentatively, and to serve as a guide to many different forms and laws of investigation. It is the purpose of this Association to aid with suggestions and criticism those seeking them and to gather together reports of progress wherever it may exist. The secretary lacks absolutely the means of reporting at present the progress made by members. Reports, programs, and copies of the minutes of local meetings should be sent to the secretary.

The future of our Association depends on enlisting parents to a greater degree than we have heretofore. A large number of Mothers' Clubs and Parents' Meetings have within the knowledge of the secretary grown up within the last few years, but very few of their members have interested themselves at all in our Association, although it has been working most effectively along the very same lines, while the help which each of these associations should contribute to the State Child-Study organization has been lost. Mr. Kirkpatrick also emphasized in his report of the year of 1897, the desirability of sending to the secretary reports of observations, experiments and other data collected, either in answer to communications or to studies suggested by the Handbook, and showed the necessity of personal inquiry and work. Each member must take some of the burden. Even

at best, the secretary is obliged to write four hundred letters a year. The number could be raised to a thousand with great advantage to the Association. It should be possible for each member to get into direct communication with the secretary. Under the present regulations, a stenographer cannot be employed, except at the expense of the secretary. Some provision should be made for some work of this kind.

The present Handbook presupposes the last. Members or others not acquainted with that will hardly enjoy the full benefit of this. It aims to show that results have been attained by Child-Study. It wishes to encourage those, who have attempted work in this line, by giving them knowledge of some of what has already been accomplished and practical help and suggestions as to the most satisfactory methods of securing results.*

To ignore much of this material, would be like using a bow and arrow where a Winchester might be used. No attempt has been made to cover all the results up to date. The plan has been rather to give those who have been called upon to contribute an opportunity of choosing rather freely the points which have appealed to them as of the most practical help. Each one has been asked particularly to incorporate in his article that material which has appealed to him as of especial value. The Summer Congress will be held as usual about the last of August at the University, and the program will consist of a paper on the Relation and Value of Child-Study to Mothers, by Mrs. Mary P. Hunt; a paper on Child-Study in Rural Schools, by County Superintendent S. J. Race, and a Round-Table, which will be presided over by Miss Lawrence. Supt. George A. Franklin will have the program in charge. A special notice will be sent to members.

After July first, communications and other papers which concern the Child-Study Association should be addressed to Miss Lida B. Earhart, Mankato, Minn., until further notice.

*To members, Studies in Education (\$1.50) costs \$1.13; the Pedagogical Seminary (\$4.00) with Vol. I., No. 2, \$3.50; Hand Books of Illinois Child-Study Society (\$3.00), \$1.80; the Child-Study Monthly (\$1.00), \$.65; and Babyhood (\$1.00), \$.80. No doubt reduced rates can be secured for the Journal of Psychology if any number of members wish to take it.

Fundamental Facts, Figures and Principles from Leading Child-Study Publications.

I.

From "Studies in Education."

BY ESTELLE M. DARRAH.

The ten numbers of these *Studies** represent the work of Prof. Earl Barnes, of Stanford University, in the field of Child-Study during the past five years. They also incorporate much of the work that has been done in California under his direction by students and teachers who have been investigating special problems. The reader of *Studies in Education* must gain two very valuable aids in his own work: first, as to what material he shall gather for Child-Study, and secondly, the best way to use his material. Much presented in the *Studies* cannot even be referred to in this article, but we select a few topics of especial interest.

REMINISCENCES.

That adult can never enter into sympathetic relations with children who approaches them with the attitude of "They-didn't-do-so-when-I-was-young." He is hopelessly vanquished by situations with which a good memory would enable him to deal successfully. Since nothing so stimulates one's memory of his own childhood as recitals of others' experiences, a course of autobiographical reading is suggested, followed by personal reminiscences along similar lines. Prof. Barnes

**Studies in Education*, edited by Earl Barnes, in ten numbers; price, \$1.50. [Special terms to members of Minnesota Child-Study Association.]—Stanford University, 1897.

quotes from Emerson: "Our wiser years still run back to the despised recollections of childhood and always we are fishing up some wonderful article out of that pond; until, by and by, we begin to suspect that the biography of the one foolish person we know is, in reality, nothing less than the miniature paraphrase of the hundred volumes of the Universal History." If we accept this philosophy, as a result of the reminiscences published we shall be quick to recognize certain phenomena which may appear in any children.

Fear, though usually concealed, is a constant source of suffering. The supernatural plays so prominent a part in children's fears, that the imagination must be kept healthy by occupying it with harmless or ennobling fancies. The natural, in fragments or in unusual relations, being a still greater source of fear, we must supply a knowledge at first hand of realities, through such training as that afforded by industrial and scientific lines of work.

The collecting instinct is universal and can be so directed as to aid in the expansion of the child's personality.

Many children adopt imaginary companions, carrying them some times through life. A most interesting reminiscence along this line indicates great danger of morbid brooding in connection with these make-believe people, and suggests the desirability of substituting real people as companions.

STUDIES IN HISTORICAL METHOD.

The student of to-day must in any field deal with original sources. Here he is set face to face with some rare and valuable sources from which he is aided in the construction of a theory of education. From old Aztec records and Chinese sacred books is determined the aim of education among these people, and the method, teachers, and subject-matter employed to create a type "loving, industrious, docile, courteous, harmonious with the social environment," but utterly lacking in self-direction and initiative. From the reminiscences of Hermann Krüsi the influence of Pestalozzi's School at Burgdorf is analyzed and accounted for. The historical sense of primitive people is studied from their songs, myths, legends

and pictographs, and the result applied to the teaching of history to children. Finally children themselves are examined to determine at what age they should begin work in history, and how the subject appeals to them. *Children at the age of eight show some sense of evidence in their answers to the following tests:

1. Write down something that happened before you were born and tell me how you know it is true.

2. How do you know that such a man as George Washington ever lived?

All possible variations of the sense of evidence are shown by the children, two extremes being the answer of a girl of nine, "Before I was born Adam and Eve died, and that's why everybody else dies. The way I know it is true because it tells in the Bible," and the answer of a boy of eleven, who writes: "I know that such a man as George Washington lived because I saw his knives and forks and all such things that belonged to him at Smith's Sonian Institute in Washington, D. C. and he is the farther of our country because he at war wone it."

Some of the valuable conclusions reached from these studies are as follows:

History is a suitable subject for children from the age of seven at least.

Early historical teaching should be in the form of striking biographies,—appearing in contemporary ballads and chronicles, and illustrated by maps, chronologic charts and pictures of contemporary objects, buildings, and people.

The Bible, Homer, Plutarch, the Norse Sagas, tales of Indian warfare, pioneer life and discovery are mentioned as sources.*

STATISTICAL STUDIES.

There is no physical, social, historical or ethical problem of to-day which is not being studied from the standpoint of evolution. Experience has proven that all normal human beings develop physically in accordance with definite and well-known laws. These studies grow out of the belief that

*Two extracts are included in the *Studies* from Mary Sheldon Barnes' "Studies in Historical Method," published by D. C. Heath in 1896.

psychically, as well, they develop in accordance with law. What is true, therefore, of the social, intellectual, or emotional state of one hundred children seven years of age, will probably be true of any child of seven who lives under approximately parallel conditions. By means of statistical studies we ought, then, to determine some general principles of psychical development, which might be applied to the practical problems of everyday work. Such studies are presented on Children's Attitude Toward Law, Punishment, Interests, Weak Time-Sense, Money, Motives, Ambitions, and Superstitions. Prof. Barnes has presented a type-study on Discipline, with all the details so carefully worked out that any student interested in this line of investigation can easily, with this model before him, work out any original study.

CHILDREN'S ARTISTIC AND LITERARY PRODUCTIONS.

These form original sources easily obtained by any student of childhood. Many typical reproductions are presented and analyzed for instance, the story of Bluebeard is told in pictures by a boy of eight. "Relations of time and place are generally ignored; thus, Bluebeard is walking about in the presence of his own corps"; and the closet with its gruesome contents is outside of the house altogether. The symbolism of childhood shows prominently in all these studies, as where the child asked to draw an apple with a pin stuck through it, drew the apple in one place and the pin in another. Prof. Barnes finds children going through the same stage of picture-writing in which are our North American Indians—a conclusion interesting to believers in the culture-epoch theory. The disconnected, fragmentary imaginings of early childhood,—the sky, "which burst and made itself again and burst again," and "the ocean all covered with ice"—and the turbulent love stories of adolescence with the "gray ashes of consumed hope," are alike suggestive of the riches still unexposed in our children's minds.

BIBLIOGRAPHY.

Definite bibliographical notes accompany every book and

article mentioned in the *Studies*, thus allowing awakened interest to be satisfied. Aside from these notes, excellent bibliographies are given of special subjects, such as Children's Plays, Child Study, Information concerning Sex, and Children's Drawings.

In summing up the *Studies* Prof. Barnes says:

"No one can examine the charts and tables connected with the studies on children's stories, the development of the historical sense, children's superstitions, children's ambitions, or the various studies on discipline, without feeling that he is well within the domain of law. The effect of this realization on pedagogy must be profound. Instead of concentrating our attention on the seemingly accidental variations in personality, we shall seek increasingly to know and understand the universal laws underlying the development of human nature. Thus we shall have a background against which individual variations will stand out boldly, enabling us to understand them, and conserve or discourage them, as seems best.

"This conception raises the teacher from the position of a patcher of personalities to a co-partnership with the Divine Spirit in the development of a law-abiding soul in a law-abiding universe."

II.

From The American Journal of Psychology.

ISABEL LAWRENCE.

An endeavor has been made to select from the more obscure studies in the *American Journal of Psychology* those which give conclusions, which are most intelligible, and of most immediate use to the ordinary teacher. There is room for only a few statements from each, and brief, general summaries labor under the following disadvantages:— they are always uninteresting as compared with concrete cases; they should be doubted, unless the reader knows the scientific standing of the author and the method used in obtaining

them; they will often appear useless unless suggestions are given for their application in pedagogy. These disadvantages can be remedied only by the reader's reference to the original source, hence the bibliography of the various subjects has been emphasized.

A group of exceedingly valuable articles upon both voluntary and involuntary motorability is first considered:

Some Influences Which Affect the Rapidity of Voluntary Movements,—F. B. Dresslar. IV: 4, pp. 514-527.

Development of Voluntary Motor Ability,—Wm. L. Bryan. V: 2, pp. 125-225.

Motor Phenomena of Mental Effort,—Ernest H. Lindley. VII: 4, pp. 491-517.

Involuntary Movements,—Milo Asem Tucker. VIII: 3, pp. 394-404.

The normal rate for the most rapid voluntary movements of the right wrist is found to average eight and five-tenths taps per second.—Dresslar.

Muscular exercise lowers the rate, mental excitement increases the rate. There is a daily rythm with the rise and fall of nervous tension. A vigorous walk decreases the rate. Increased central activity favors it.—Dresslar.

The rate of voluntary motion in a given joint of a given individual is very constant.

It varies with the effect of local cold and local fatigue. The superiority of boys over girls increases slightly from the age of six to the age of nine, and more decidedly from fourteen to sixteen. They are nearest together at ten, eleven and twelve. At thirteen the girls are superior to the boys for each of the eight joints tested. From twelve to thirteen is a period of retardation of rate in boys, and of acceleration in girls. There is a slightly greater difference between right and left sides in boys than girls. Therefore bilateral asymmetry need not be regarded as abnormal; but rather, in some degree, an attendant and sign of rapid growth.—Bryan.

Automatisms increased in number and intensity with age, in the kindergarten. Pupils in the primary grade show a great falling off in frequency and intensity of automatisms:

automatisms are a sign of the difficulty of tasks.—Lindley.

Automatisms of accessory muscles are most frequent. Muscles of the face and head, the fingers, the feet, furnish a large majority of the total number. Automatisms of the fundamental muscles, body, legs, arms, disappear rapidly with age. Movements of eye, brow, and jaw, show greatest increase with age. They increase in intensity, and often in number, with increase of effort.—Lindley.

The favorite age for chorea, or "exaggerated figetiness," is from six to fourteen. Untaught muscles never suffer chorea. Arms suffer more than legs, fingers more than arms, and the face most of all.

Motor processes are not fully developed until the close of adolescence. The pressure of modern life, with its demands for a multitude of fine and precise adjustments, is severest of all upon the accessory muscles, just those whose centers develop so late and are consequently in the child least under control. Conventionality tends to repress the expression of feeling or thought. This operates to check the nervous exaltation and the intense expression of the young. The school demands bodily stillness, which requires a degree of self-control found only in the best-trained adults. Because these conditions interfere more or less with the normal growth of the child, they tend to render inhibition permanently defective. Some automatisms are due to sympathy and imitation; some appear in mental effort, even among the best-trained thinkers. Automatisms must not be indiscriminately dealt with in a child. While some deserve summary repression, others are a means of developing working power, and should not at least be discouraged. If in learning to write, automatisms do not tend to fall away rapidly with practice, then it may be assumed that the centers and muscles involved are not ripe for such a task, and the strain of performance is likely to produce not skill, but nervous disorder.—Lindley.

It must be remembered that Lindley is using automatisms in the sense of purposeless movements.

Under involuntary movements, Mr. Tucker shows that the idea of motion causes involuntary movement in the direction of the motion. The actual muscular feeling comes with the visual image of the motion.

Frederick Burk, in vol. IX: No. 3, of the *Journal*, gives a most valuable summary of what is known of the growth of children in height and weight.

“At six years the sexes vary less in weight than two pounds, with the advantage in favor of the boys. In the case of the latter, there is a general rising tendency culminating in the eighth, ninth, and tenth year, followed by a decrease to its lowest point, just before the prepubertal increase. The acceleration period in boys begins somewhere between the eleventh and thirteenth years, and ends usually with the sixteenth. The maximum increase being the fourteenth, fifteenth or sixteenth. In the case of girls, the beginning is a year or two earlier than boys, and is ended in the fourteenth or fifteenth, being shorter in duration. In height, American boys average an increase of about twenty per cent. in the years from six to twelve. Until ten to twelve years, there is no material difference between the heights of the sexes, but during these two years girls begin to grow faster than boys, and for two or three years are actually taller. During the fourteenth or fifteenth year, this rate materially slackens, and though they grow slowly for two or three years longer, they practically complete their growth in height at the age of fifteen. With boys, the period of accelerated growth in height begins between twelve and fourteen, and ends about the seventeenth. They overtake the girls at fifteen.” These figures are based on studies by Bowditch, in Boston; Porter, in St. Louis; Peckham, in Milwaukee; a study in Oakland, a study by West, in Worcester, and by Gilbert, in New Haven.

There are rhythms in growth which correspond to the seasons, and to day and night. The periods for growth in weight, are those in which there is no growth in height, and *vice versa*. Children of the favored classes are taller and heavier than those of laborers, due to better nutrition, freedom from work, etc. Peckham explains the growth of Milwaukee children over Boston children, on the theory of a greater density of population in the latter city. Others attribute this to climate.

Susceptibility to disease is less in the pubertal period than at any other time, acceleration of growth seems favorable to health. Power to resist injurious, external influences, is

weakest in the period just before puberty. It has been stated that the times of rapid growth are the periods most favorable to mental work. Mr. Burk is unable to find full corroboration of this, the authorities differ. Meantime he points out the great need of knowledge upon this point in the practical work of education.

Studies of the imaging power in memory and imagination, have conclusions of great value. Some of the articles referred to are:

Growth of Memory in School Children,—T. L. Bolton. IV: 3, pp. 362-381.

Experiments on Memory by Means of the Interference of Associations,—John A. Bergström. V: 3, and VI: 2 and 3.

Rhythm,—T. L. Bolton. VI: 2.

The Memory After-Image,—Arthur H. Daniels. VI: 4, pp. 558-564.

Comparative Observations on the Indirect Color-Range of Children and Adults,—G. W. A. Luckey. VI: 4, pp. 489-505.

Size of Familiar Objects,—H. K. Wolfe. IX: 2, pp. 137-167.

Bolton has the following conclusions:

1. The limit to the memory span for pupils in the public school is six,—six disconnected digits, letters, or words.

2. The memory span increases with age rather than with the growth of intelligence. Experience in this matter is a better school than books.

3. Intellectual acuteness, while more often accompanied by a good memory span, and great power of concentrated and prolonged attention, is not necessarily accompanied by them.

4. Memory images pass through three stages in leaving the mind. First, they suffer a confusion of order; second, a loss of certain elements and the substitution of associated elements; third, a complete loss of some elements and no recovery.—Bolton.

Bergström proves through experiments that “in spite of every effort, a very decided interference takes place when we attempt to associate a new reaction with an old stimulus, and

this interference is constant. The confusion which results in the minds of young students in presenting a subject to them in more than one way, is an illustration. Much that has been attributed to the decreasing of memory power with age should perhaps come under the category of interference."

The experiments made by Ebbinghaus proved that it required twelve per cent. more time to learn a sixteen-syllable series from five to seven p. m., than from ten to twelve a. m. Four a. m., twelve m., and four p. m. are unfortunate hours for the memory.

In regard to images, Luckey has found concerning color, that if the average range of the adult eye for four colors is represented as 100, the average for thirteen-year-olds would be represented by 77, and the seven-year-olds by 61. The greatest difference was found with the blue, and the least with the red. As compared with the adults, children have a greater range for black and white than for color.

Difference in sex makes no perceptible difference in the extent of the color range. Color training does not seem to increase the color range.— Luckey.

Mr. Luckey's theory is that as the race has only gradually developed appreciation of color, so the mechanism for the discrimination of color, which begins to develop in earliest childhood, is only completely developed in adult life.

Such studies help us wonderfully in realizing how different the image the child forms in perceiving an object is from the image we think he is forming. Wolfe startles us with his discovery of children's images of size. "Four hundred children who had had four years' training in our public schools, thought of a dollar bill as having about half its actual size. Young children underestimate the size of coins and bills. Mature persons of intelligence overestimate the size of the silver dollar, half dollar, and quarter dollar. The more advanced classes produce larger coins and bills than the elementary classes. General conclusion:—To young children a memory image is smaller than its object, while in the minds of adults, it may exceed the object in size."

The Language of Childhood, by Frederick Tracy, vol. VI: No. 1, pp. 107-139, is a standard article upon the subject,

with a fine bibliography. It might be summarized here, but the summary could give no idea of one of the most delightfully written studies for mothers and teachers to read.

In the interest just now felt in new methods of developing the idea of number in children, articles like the following, are timely:

Arithmetical Prodigies, — E. W. Scripture. IV: 1, pp. 1-60.

The interest with this study lies wholly with individual cases, not with generalizations.

"When Buxton went to see King Richard III., performed at Drury Lane playhouse, he fixed his mind upon the number of steps in the dance; he attended to Mr. Garrick only to count the words that he uttered."—Quoted by Scripture.

This reminds one of a modern first grade, who, when asked what they saw in a beautiful picture, said, "That tree is twice as tall as that tree, this rock is a third as high as that rock," etc.

"A Study of Puzzles," by Ernest H. Lindley, in VIII: 4, pp. 431-505, gives the puzzle age for boys as culminating at twelve and thirteen, the time when Mrs. Barnes finds the power of legitimate and imaginative inference to have strongly developed. As might have been expected, this is one or two years earlier with the girls. Eighty-two persons of pronounced puzzle interest are reported as inventive and original, to eighteen who are not so.

An interesting study of "Number Forms" is given in the same number by D. E. Phillips. The Wellesley College studies on this subject, and on that of Colored Hearing, etc., are found in V: 2, pp. 260-271, and V: 4, pp. 439-464, and VII: 1, pp. 90-107. The last study traces the cause of the number form back to childish associations, but proves that they remain a part of the mental furniture for life, being usually more or less useful.

Dr. Hall's study of fears in VIII: 2, pp. 1-249, is one of the most extended and valuable studies he has given. The various things feared are classified into various celestial phenomena, darkness, ghosts, animals, fire and water, strange persons, death and disease. Some of these fears are traced to

physical conditions, but by far the larger part, which are outgrown from childhood to adult life, are considered to be rudimentary organs, traces of a period when these fears helped to preserve the race, as in the baby's fear of big eyes, teeth, and fur.

Dr. Hall's study on Children's Lies, III: 1, pp. 59-71, is omitted because of the later study in the Pedagogical Seminary, vol. I: No. 2.

The Psychology of Tickling, Laughing, and the Comic.

—G. Stanley Hall and Arthur Allin. IX: 1, pp. 1-41.

This study has, perhaps, its most practical page in regard to the use of the practical joke in giving an egoistic victim the unwelcome task of readjusting both his self-knowledge, and what is far more serious, his self-valuation. The danger is pointed out, however. Simple humor, which laughs with the victim, is a valuable school of human nature, but satire, which laughs at him, is harmful.

Old Age and Death.—Colin A. Scott. VIII: 1, pp. 67-125.

Valuable as this study is, but a very poor idea of it can be given in a brief summary. "Brain workers live longer than muscles workers. The difference of emotional depth in face of the thought of death between the returns from adolescents and young children, is exceedingly well marked." Dr. Scott suggests that children should become accustomed to the idea of death before the age when the development of the emotions makes permanent shock.

Dr. Hall's study of the Early Sense of Self, in IX: 3, pp. 351-395, is of great practical value.

"Too many companions of the same, or of too many different sorts, city life, much society, and indeed, civilization generally, is not favorable for the quiet inner growth. Too many toys, interests, studies, dresses, pleasures, moods, and even too frequent resolutions of radical reform, are dissolutive. On the other hand, an education that fits native inter-

ests; some occasional obstinacy and self-assertion; the keeping of a personal conscience, and a sense of duty and honor, and knowing how it feels to follow these against the mob; friends and interests; some few, deep beliefs we could die for; fixed and regular habits; vigorous thinking; — these cement and strengthen the ego-synthesis."

For those who would extend their study of children into lines of Sunday School work, the following studies, which we cannot summarize here, are suggested:

The New Life,— Arthur H. Daniells. VI: 1, pp. 61-107.

Psychology of Religious Phenomena,— James H. Leuba.
VII: 3, pp. 309-385.

Study of Conversion,— Edwin Starbuck, VIII: 2, pp. 268-308.

The Moral Imperative,— James H. Leuba. VIII: 4, pp. 528-559.

The Psychology of Religion,— Edwin Starbuck. IX: 1, pp. 70-125.

The Study of Moral Judgments,— Frank Chapman Sharp.
IV: 2, pp. 198-234.

III.

From the "Pedagogical Seminary."

PRINCIPAL HIRAM W. SLACK.

In investigations in this country upon the development of the child, Clark University has led; and the "Pedagogical Seminary," published under direction of its president, contains results of investigations and studies there made, and also contributions from observers elsewhere. There is here brought together a very large body of material covering, many departments of research, and, in some fields, comprehensive and exhaustive. In the observation of children's activities no collection can be found equal to this; the whole field from the teacher's point of view has been searched. Ethnology has received contributions in studies of "Children's

Drawings," of "Children's Rights as Seen by Themselves," of the phenomena of "Adolescence" and others. Sociology is represented in a study of "Youthful Degeneracy." The physiology and hygiene of school life have received much attention; while the greater number of articles bear upon the psychology of growth and development.

The most fruitful investigations for the teacher have dealt with the physical life of the child: The former prevalent idea that we are dual beings having two lives, the one animal, the other intellectual and spiritual, is vanishing. No clear conception in regard to the source and nature of divergent manifestations in the same being has taken its place, but investigation has endeavored to discover a basis for such conception. There has already been aroused the conviction that there is the most intimate relation between physical and mental states, that healthy mental action is conditioned upon sound bodily action. It is not meant to discuss here the structure of the brain nor the modifications which tissue undergoes in mental activities. These subjects are for the neurologist and the physiological psychologist; and they are as far from an analysis of vital forces as ever. The general fact of special function for definite areas in the cerebrum is established and has a bearing upon pedagogy. A knowledge of cerebral and nervous pathology is desirable to the teacher; but a knowledge of general and nervous hygiene is of more worth. The teacher has to do with the training of healthy tissue, rather than with the correction of abnormal conditions as has the physician. But there is no sharp line of demarkation between the normal and the abnormal condition. A state of absolute health, mental or physical, is rare. The effects of deviations from the normal are to be observed and carefully studied, to the end that we may labor to the best possible advantage under existing conditions and secure the best results possible to the individual, and through him to society. The quality of school work is impaired by every deviation from the normal in sense organs and nerve fibre, in the muscular, bony digestive, circulatory or respiratory system. Deviations are often slight and obscure, escaping the notice of all except trained observers. To determine their nature and extent may require the keen discrimination of the skilled physician.

In the case of sense organs, variations from the normal are of so frequent occurrence that common symptoms are generally known and also their effects upon mental activities; but the teacher is not often able to place the child with defective sight or hearing on a par with the normal one. This is as much from a lack of appreciation of soundness in the general public as in our profession. We are learning, however, that there are many symptoms of disease or impairment in sense organs of which we are ignorant or unsuspecting.

Two articles in our journal deserve attention in this connection:

The Hearing of Children, vol. ii., p. 397.

Eye Defects in Students and Children, vol. v., p. 202.

Statistics in regard to the hearing of children have been collected in schools in New York City and Terre Haute. Observations are also quoted from Glasgow, Paris, Bordeaux, Stuttgart, Munich, Copenhagen and St. Petersburg, with very various results. Tests were sometimes made by whispering, sometimes by a watch. The former mode seems to have given more reliable results. No standard for normal reach of hearing can be deduced from these observations. Dr. Sexton at New York placed it at twelve feet for the whisper, Worrell at Terre Haute at fifteen feet. The percentage of defectives varied from $13\frac{1}{3}$ to $27\frac{2}{3}$. Of 570 children examined in New York 76 were defective in one or both ears; in Terre Haute 125 in 691. For all observations recorded an average of 20 per cent. of defectives is a fair conclusion.

The following facts are significant: Of ninety-eight defectives at Terre Haute only one was known to the teachers to be such. At the same place it was found that those with impaired hearing were, for the most part, the oldest ones of each grade, also generally the largest in size, and they usually occupied a back part of the room. Chrisman, in the above named article referring to the examinations made at Stuttgart, says:— "Weil finds that the results show better hearing powers in those schools frequented by the better classes than those attended by the poorer classes; that the younger children hear better than the older, and that the frequency of defective hearing increases with the age of the

children. Unfortunately some ear affections escape observation and especially when they are not well pronounced. The sufferers are often misjudged and considered inattentive, and so treated, when they are simply hard of hearing. So thoroughly is Weil convinced of this that he has always insisted that every *inattentive child should have its ears examined*. He further states that he believes the great majority of those children whom he examined and found defective could be much benefited, and many entirely relieved in a few minutes.

Mr. Swift of the Stevens Point Normal School, has recorded examinations there made upon the eyes of mature pupils in the Normal School and of children in the model department. He takes as the normal vision the ability to read at twenty feet type nine millimeters (.35 inches) square. In 257 Normal School students examined, only thirty-seven reached this standard; and of this thirty-seven all but three had far sight, astigmatism or some trouble with muscles of the eye. Swift says:—"The number of cases of manifest muscle trouble is remarkable. * * * The percentage of pupils with normal vision in both eyes is much greater in the Grammar grades than in the Normal department, and, while the percentage in the intermediate and primary is less than in the Grammar, it is still markedly above that in the Normal department, and, while the percentage in the Intermediate and Primary is less than in the grammar, it is still markedly above that in the Normal." It seems to be the case that the demands of our highly artificial life, including the work in school, aggravate any tendency toward weakness and irregularity of vision. If there is imperfect function in any organ which is continually used, especially in so delicate an organ as the eye, there is increased strain upon the organ and, through the nervous irritation set up, impaired function in other organs. A long list of disorders is attributed to eye strain, resulting from unequal vision in the two eyes, from astigmatism or from strain of muscles of accommodation. Some of these are headaches, backaches, restlessness, dyspepsia. "Any defect of the eye which must be overcome before clear vision is possible constantly draws from the nerve centers more force than the center can healthfully supply."

There is need to extend our knowledge of normal and efficient action in other organs than those of sight and hearing. Experiments made upon young children to test their dexterity, accuracy of movement and co-ordination of brain and muscle brought the fact that in children of six years the power of co-ordination for the finer muscles does not exist. They are not deft with the fingers, cannot tap regularly, cannot thread needles and, in some cases, cannot walk normally when the eyes are closed. The following conclusion is important: Movements made with the larger muscles are most easily acquired; co-ordination comes first for the muscles of the trunk and neck. "The order of development of control is body, shoulder, arm, fore-arm and hand." Use of the fore-finger precedes that of others.

A Preliminary Study of Motor Ability, Vol. III, p. 9.

But in the process of training the intellect exclusively, we expect the child to maintain control of all the muscles for a considerable time, or to remain passive, which is equally difficult. And in writing and drawing he must have control of the fine muscles of the hand. Still we do little or nothing to help him in acquiring control of muscles, large or small.

It is true that we must have regard always to the attitude of the specialist in science who detects and possibly exaggerates any variation from the normal and desires to apply a correction at the particular point of weakness or defect, not allowing for the balances and compensation which nature herself applies. Still we need the specialist to detect and expose the weak and defective point. The requisite qualification for the teacher is the knowledge that variations from normal activity in one sphere may result from weakness of organs or impairment of function where it would, from casual observation be least suspected; that sluggish, retarded and deficient mental activities are the result of physical defects; and also that the expenditure of nerve force in the child in the direction of the supposed requirements of education may be accomplished at a fearful sacrifice in other directions.

This leads to a consideration of corrective measures. Is it not true that teachers themselves should not only realize the dangers inherent in current methods, but should consciously set themselves to the task of making public sent-

iment in favor of other and better methods, even though they involve radical changes in appliances, methods and results? True methods and aims will lead toward health, physical and mental soundness, rather than away from it. There is a prospect open in two directions—toward the adequate and possible cultivation of the body and of the emotions. On the physical side the following from the article just quoted is suggestive and encouraging. "The close relation between muscle, nerve and mind makes it impossible for exercise to effect one alone. The various senses and powers of mind are all called into play to give proper adjustment to the muscles in all the range of activity from the play of the child to the work of the artist and the artisan. Herein lie great possibilities of education. Motor centers make up about one-third of the brain. By motor training brain growth and mental activity are increased and new avenues are opened leading to a more intimate acquaintance with the world."

Bearing upon the same subject and containing a valuable exposition of the relations between labor, manual training and exercise generally, see an article, "An Early Phase of the Manual Training Movement, Vol. V, p. 285.

On the ethical and emotional side the following is from A. Caswell Ellis in "Suggestions for a Philosopher of Education:" "Intellectual force and rational power are surely high and noble attainments, but cold reason cannot alone handle many of the deeper problems of life, and there are depths of the soul to which it gives no adequate expression."

IV.

From Miscellaneous Sources.

BY SUPERINTENDENT S. S. PARR.

It is now a little more than one hundred years (1787) since Dietrich Tiedmann sent forth "The Development of Children's Mental Powers." This was what might be called a "blanket study" of children. It was largely speculative and reminiscent. But it marked a new road for psychology.

Thenceforth the growing powers of the child were to be treated as markedly different from those of the adult.

In 1847, another German, Goltz, set up an important waymark in child-psychology, by publishing in Berlin "Das Buch der Kindheit" (The Book of Childhood.) This followed the reminiscent method, and was also an attempt on the part of its author to recall his thoughts, feelings and acts in childhood. It was the beginning of this very important mode of study, a method which is used effectively to-day.

A few years later (1856) Sigismund published "The Child and the World." This monograph was probably based on the earlier work of Loebisch, treating the development of the senses. These studies are to be remarked as the first specializations in child-psychology. They introduce a new form of investigation, that is, the study of particular elements of child-life.

In 1852, Daumer set forth his observations on the sight of Caspar Hauser, a neglected boy who had grown up like a wild animal. In this study, Daumer opened a new field, that of abnormalities, or phenomena of child-life outside of the natural or ordinary. This has been a very suggestive arena of investigation, and it has given rise to many useful hints in the make-up of normal children.

The statistical mode of studying children's minds came into use in 1870, when Bartholomaei and Schwabe gave forth "The Contents of Berlin Children's Mind on the Entrance to School." Nine years later Professor G. Stanley Hall repeated this study on a large number of Boston children, and thus started the impulse to statistical Child-Study in this country. Although one who is familiar with children must dissent from many of Dr. Hall's conclusions, this was a valuable contribution to current pedagogy.

There remains but one important aspect of child-investigation or mode of study to be mentioned. This is the method of exact scientific measurements. Like most exact science of this era, it originated in Germany. The beginnings of this branch of Child-Psychology are found in the microscopical investigation of the cells and fibers of the brain and nervous system. The great names in this field of research are Wundt, Stumpf, Munk, Goltz, Exner, Fechner, Golgi, Helm-

holtz, etc. In this country the leading representatives of the measurement psychology are Dr. G. Stanley Hall, Professor J. McK. Cattell, Columbia University, Professor E. W. Scripture, Yale University; Professor E. B. Titchener, Cornell; Hugo Muensterberg, of Harvard, and Joseph Jastrow, University of Wisconsin. Some of the leading subjects investigated are the sensitiveness of the skin, the color and form power of the eye, reaction-time to stimuli of various kinds, thinking-time, steadiness and control, reactions of the will, etc.

So far, one of the important results achieved is the intelligent fixing of forms of study in child-psychology. To some extent, they are overlapping and conterminous, but they are distinct ways of approaching the study of children's minds. They may be designated the "blanket," the reminiscent, the specialized, the statistical and the exact measurement 'methods.' For certain ends, each is valuable. As they serve different purposes, there is no competition among them, and one is not to be disparaged to the advantage of the others. Accordingly as one or another is prosecuted with thorough system, or with loose and general connection of elements and processes, all may be either scientific or unscientific.

For the ordinary purposes of teaching, the student of children does well to employ all these modes of investigation. The advice, sometimes given to teachers, to limit themselves to the blanket and reminiscent methods of study is not well considered. No judicious person would claim that the ordinary teacher is capable of scientific Child-Study, but it is true that he or she may use every one of these methods in their unscientific way.

Besides results in the method and limitations of the subject, child-psychology has reached other conclusions. Of these, some relate to the physical, some to the mental side of the child's life.

Siegert and others have studied children relative to the proper location and housing of schools. They have determined that, including aisles, entrances, room for the teacher's desk, etc., according to age, each pupil ought to have from 17 to 28 square feet of floor-space and from 210 to 280

cubic feet of air space. For a school of thirty-six pupils, the light-surface (panes of glass) should aggregate 168 square feet. For this number of pupils, the ideal room is one 23 feet wide, 32 feet long and 14 feet high; the location of the building should be such as will insure good drainage, free play of the air and abundant light.

To the teacher of the rank and file investigations showing the condition of pupils in wholeness of the special senses are of moment. Examination of the eyes of something like 30,000 children, by Cohn, Donaldson, Willinger and others reveals the fact that, varying according to condition in life, short-sightedness (myopia), long-sightedness (hypermetropia), irregularity of sight (astigmatism), and the diseases of the eye-membranes affect from two persons to fourteen persons in every hundred of school attendance. There are corresponding deficiencies of the ear; but the number is not so great. Among the children of the poorer classes in St. Petersburg and Moscow, Frau Ekkert and Dr. Michailoff found that twenty-two to twenty-seven per cent. were deficient in nutrition or showed defects of chest, limbs or teeth. Americans are better fed, better housed and better cared for; yet intelligent education cannot neglect the existence of these things in this country.

The body and brain of the child have been studied. The intelligent teacher cannot be ignorant of the conclusions reached by these investigations. Dr. Bowditch, of Boston, has established the rhythmic variations in the growth of boys and girls. Boys grow most rapidly at six years old, again at about ten and at fourteen years of age. Except that they come a year or two earlier, girls show corresponding waves of rapid increase. In boys, the largest increase of brain weight usually occurs from fourteen to sixteen years of age. According to the observation of Dr. Boyd in London, on 2,030 cases, the growth during this period was three and one-third ounces. The same authority (quoted in "Warner's Study of Children," gives the increase of brain-weight in girls between seven and fourteen, as nine and two-thirds ounces. These facts form at least a partial explanation of the "drifting period" in boys between twelve and fourteen, and of the inabil-

ity of many girls to do good school work at nine to twelve years of age.

The study of mental phenomena has taken wide scope. It ranges from such studies as that of Francis Warner on the way children use their eyes in seeing to Margaret Schallenberger's "Study of Children's Rights." Dr. Warner says: "A boy, eight years of age, in a preparatory school, was said to be so dull at learning Latin, that it was thought impossible to continue the attempt to teach him. He was healthy and well made, he showed no signs of mental defect, and was otherwise quick and bright. He had learned to read story-books for pleasure. I noticed that, in reading, he followed the words on the printed line by moving his head, not moving his eyes in their orbits; this did well enough for story reading when he skipped much of the page. Moving the head, in place of turning the eyes did not admit of sufficient accuracy for studying Latin. Some attention to eye-drill soon removed all the difficulty complained of, and the boy made good progress." Thousands of school failures are capable of cure by like simple, but intelligent measures. Miss Schallenberger's study of discipline enforces the idea that control, to be effective, must take the child's view of the case into account.

One of the helpful lines of study is that on discipline in the home and school. At Stanford University, Earl Barnes conducted a careful investigation covering 1,800 children. Concerning what pupils themselves think of punishments, there is revealed much that is new. Prof. Barnes says: "Injustice is charged up about equally to parents and teachers. Young children give most of their instances of injustice from parents, but give less and less of home cases as they grow older. Older children give most of their cases of injustice from the school. * * * There is little difference between boys and girls. The common form of punishment cited is whipping * * * The highest form of punishment (that which is educative) is seldom used, or else it is not looked upon as punishment. * * * The most common offense is general disorder. One quarter of offenses are negative in character. * * * One quarter recall no unjust punish-

ment. * * * Nearly one-half claim to have been innocent.—(From Stanford "Studies in Education.")

In "The Pedagogical Seminary," vol. iv., No. 3, Frederick L. Burk, of Clark University, presents a study of "Teasing and Bullying." It is based upon responses from 291 persons. It is somewhat parallel to an article in "Die Kinderfehler" (Dritter Jahrgang, Zweites Heft) by Dr. Karl Groos, on "Die Necklust," or Enjoyment of Nagging. The conclusions are substantially the same. Teasing and bullying are transmitted instincts, and rest upon the animal impulse of combat. The disposition of children to oscillate between bullying and kindness appears to be the alternation due to holding one moment to savage instincts and the next to those of civilization. This tendency is the foundation of certain forms of criminal action, which assert themselves in later life. Toleration of teasing, bullying, nagging and even athletics is by Dombrose and others thought to be either impossible or questionable. The question of nagging is one of practical importance to all teachers.

In the "Educational Review" of March, 1898, Dr. Herman T. Dukens, of Clark University, gives a resume of the school fatigue question in Germany. This theme has attracted much attention there, and is worthy of careful attention here. The chief distinctions are those between fatigue, actual loss of power from exercise, either temporary or permanent, and the feeling of weariness. "A boy engaged at work in which he takes no interest may become so weary in fifteen minutes that he can accomplish nothing." On the other hand "a child at play may become fatigued, but never weary of his activity." To some extent fatigue may be overcome, by repetition of an action and the establishment of automatic doing or habit. On the other hand, fatigue may be of such nature that only rest, better food and change of vocation can correct it. The school remedy for weariness is frequent change of program.

For the ordinary teacher, one of the most helpful books is James Sully's "Studies of Childhood" (New York, D. Appleton & Co.) Its point of view is the study of the spontaneous utterances and actions of children. It seeks to observe them when they are untrammelled and give free swing to their instincts. The facts given have been collected in this way.

Prof. Sully's view is that the best basis for a child-psychology would be a series of monographs after the pattern of Preyer's observation in "The Soul of the Child." The topics treated show what the author considers important. They are the "Age of Imagination," "The Dawn of Reason," the child's thoughts about nature, God and its own mind; the beginnings of linguistic imitation, fears, egoism, law, the struggle of the child with law and the meaning of early attempts at graphic representation. As introductory conceptions to child-psychology, these are of assured value. With an equipment of such ideas, the teacher is prepared to go forward in her everyday work.

Abstract of Two Papers to be Delivered at the Summer Congress.

(A)

RELATION AND VALUE OF CHILD-STUDY TO MOTHERS.*

MRS. MARY P. HUNT.

"He who helps a child helps humanity with a distinctness, with an immediateness, which no other help given to human creatures in any other stage of human life can possibly give again."—PHILLIPS BROOKS.

I.

PURPOSES OF CHILD-STUDY.

1. To enable the mother, teacher, and scientist to understand the child, the better to serve him. This seemingly new study is but a return to the teachings of the Master, who centuries ago "called to Him a little child and set him in the midst of them and said: 'verily I say unto you, except ye turn and become as little children ye shall in no wise enter the Kingdom of Heaven.'"

2. To collate and disseminate facts which will enable

*Printed as a basis for the discussion of the subject.

parents, teachers and educators to more wisely guide the child in the development of his triune nature.

The importance and usefulness of this work demands fuller recognition. It is the heart of the educational progress of the day.

II.

DIFFICULTIES AND DANGERS OF CHILD-STUDY.

1. The progress of the work is kindred by the lack of precise knowledge of its nature and scope. The mother, teacher and scientist have worked independently and from different standpoints thus arriving at one-sided conclusions.

2. Untrained observers have drawn from insufficient data, unfounded conclusions. Opinions, which should have been held tentatively, if at all, have been set forth with an assurance which properly belongs only to well attested truth. Some observers, in their zeal to obtain facts in regard to child nature, have made the child self-conscious, thus robbing him of his birthright, spontaneity, and securing only worthless, unreliable data.

III.

THE RELATION OF MOTHERS TO THIS MOVEMENT.

1. Mothers exert the strongest, most intense and prolonged influence over the physical, mental and moral development of their children. They mould the forces that shall rule the world. How necessary then that they should be widely and wisely trained! The Child-Study Association aims to assist mothers to a wider knowledge of the child's needs and a wiser understanding of child nature.

2. The upbuilding of scientific Child-Study is dependent upon the intelligent co-operation of mothers, for "We speak that we do *know*, and testify that we have *seen*," and the specialist relies upon the testimony of eye and ear witnesses, many times multiplied, to secure for him the valuable facts, from which he deduces general truths. Who can so well serve the cause of truth as she who receives her commission from its Author—the God of Truth—and who accepts as His gift her crown of Motherhood?

3. Mothers have always been students of childhood and the wise mother will welcome gladly her new assistant in the field in which she has hitherto walked alone. The Child-Study Association will be received by her most cordially and she will give it her hearty, sympathetic support, for its aims are her own.

IV.

THE NEEDS OF THE MOTHER.

1. To understand the *order* of the growth and development of the child's three-fold nature, that she may minister with greater wisdom and patience to the physical, mental and moral needs of childhood. The mother with the multiplicity of her daily cares meets many perplexing problems, which she anxiously strives to solve. The scientist with his knowledge of the *order* of development of child life, patiently awaits the unfolding of the moral nature, not expecting the flower and fruit, before the stalk, stem and leaf are developed. The fruits of his research, presented to the mother in simple form, would lighten her burdens and increase her efficiency.

V.

SOME RESULTS OF CHILD-STUDY.

1. In educational institutions.
2. In Mother's Clubs.
3. Among scientists and individuals.*

*This study is based on returns to the following questions for mothers:

1. Do you think a mother's success in training her children increases in proportion to her ability to understand and enter sympathetically into their thoughts and feelings?

2. Does the school help you in training your children in habits of right doing? If so, state three ways. If not, why?

3. Should the school give more time and effort to moral training?

4. Should the government of home and school conform?

5. How can child students help to unite the education of home and school?

6. Do you think a knowledge of the periods of growth and the maturity of the different organs and parts of the body important, in determining the training and education of the child?

7. Do you think good health in the child essential to good mentality and morality?

8. Do you think self control in adult life is secured by renunciation of self control in childhood?

9. How many parents protect the purity of their children?

10. At about what age does the conscious use of impure words or the participation in impure acts first show itself in the child?

11. The little child is at first self-centered. What is the cause of selfishness?

12. Is it helpful or harmful to teach children, who have no experimental knowledge, forms of vice and sin we would see them avoid? Does it strengthen them to resist temptation?

13. Does the pre-natal condition of the mother's thoughts and feelings affect the character of the child?

14. If a child's mind unfolds like a plant, in natural order, would a knowledge of

(B)

Child Study in Rural Schools.[†]

SUP'T S. J. RACE.

Is there something in tangible form for the average rural school teacher?

If so, what phase of the question can she best analyze?

Shall she study the mental temperament of her pupils?

Their Moral Tendencies?

Ambitions?

Hopes?

Fears?

Desires?

Sources of Joys and Sorrows, etc.?

Or, shall it be physical defects of pupils studied with respect to—

(a) School Environment,

1. Speaking,
2. Lighting,
3. Heating,
4. Cleanliness,
5. Position,
6. Movements,
7. Results.

(b) The Home,

1. Influence of.
2. Co-operation of Parents.

(c) Hygienic Conditions,

(d) Foods,

1. Kinds of,
2. Preparation of,

the order of development of mental processes be of assistance to you in understanding what to expect from a child in mental capacity, and what to provide in mental food?

15. Altruism means love or service for others. When is it manifest in the child?

16. Inasmuch as nearly all children look with favor upon handcraft, should work be a vital part of education?

17. What do you consider the most valuable lines of work in child study for mothers?

18. Has child-study done anything for you up to this point? If so, what?

19. What do you consider to be the mother's greatest needs to make her more efficient in the training of her children?

20. Have you children? What are their ages? Please give your name and address.

[†]Printed as a basis for discussion of the subject at the Summer Congress.

(e) Dress,

1. Relation of perspiration to clothing and health,
2. Foot wear,
3. Fashion *versus* common sense,
4. Dress principles for both sexes,

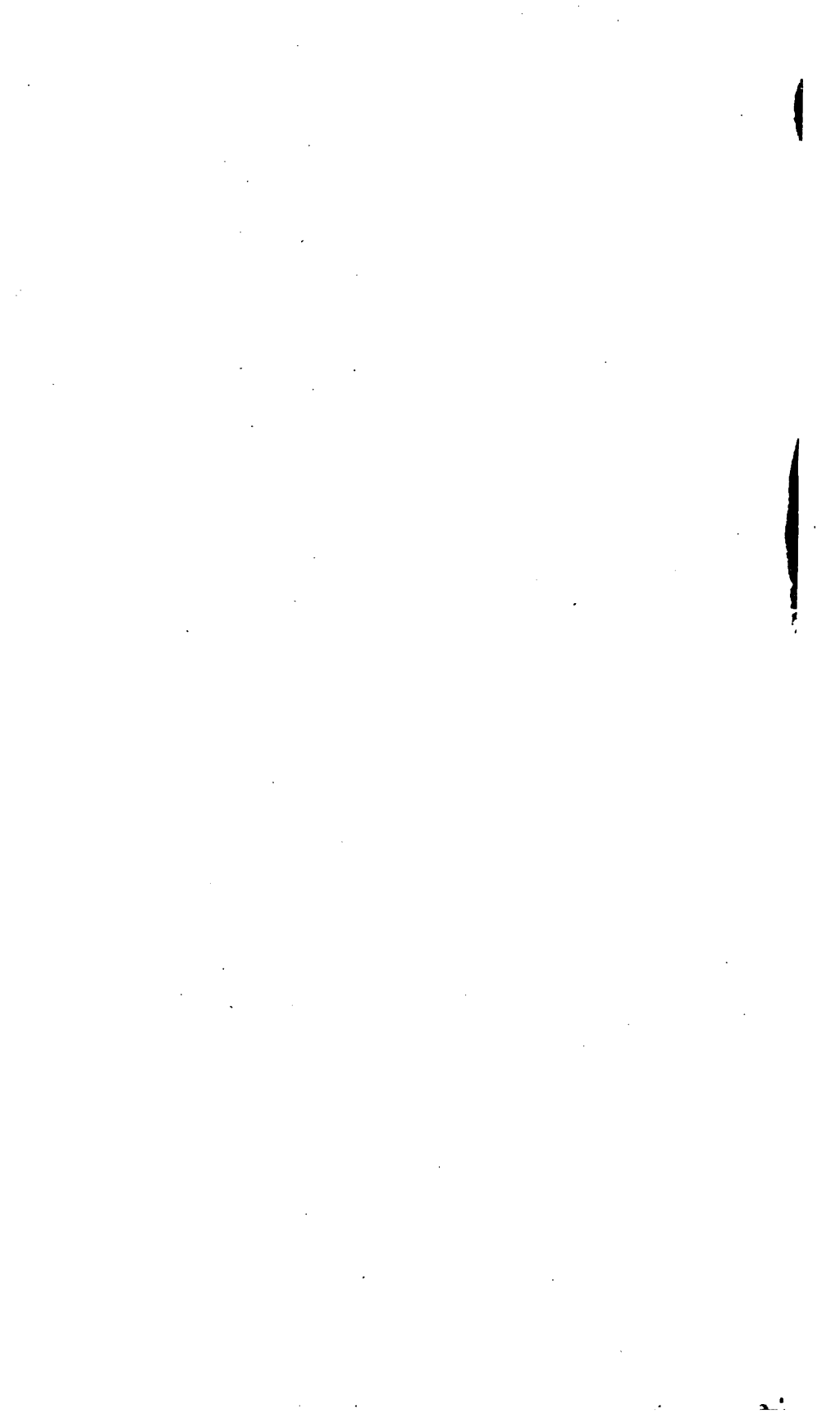
(f) Special cases,

1. Pale faces,
2. Sunken chests,
3. Low temperatures,
4. Difficult and irregular breathing,
5. Value of pure air and proper breathing.

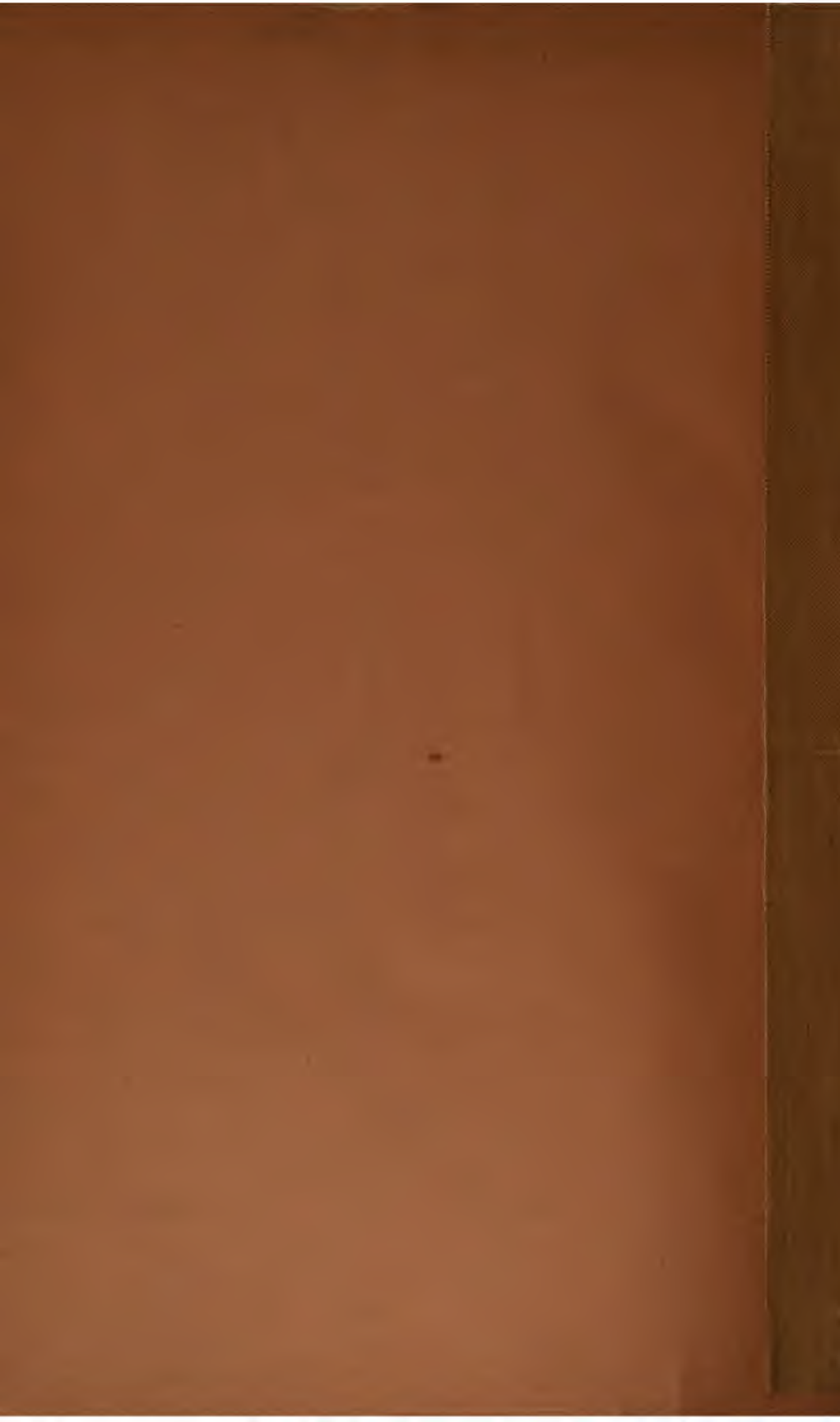
It would seem that the rural school teacher has sufficient opportunity to gather data of a sound, practical and helpful nature pertaining to her work as a child instructor. She should certainly know the essential traits of child life and its surroundings. The teacher who can face thirty children from as many homes, born and reared under different conditions and not feel that each member of that group needs special treatment, belongs not to this era. "The child, not the book," is the new word of modern education. What are its capabilities—its adaptabilities—are now asked by the progressive teacher?

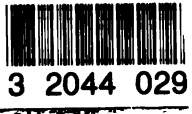
Carelessness and ignorance about the defects of childhood will pass no longer among those who must have the care of children for instruction between the ages of five and sixteen. The student is but the development of the child in school. Training must be given to those who are to prepare our children for manhood and womanhood.

There is solid ground enough for the rural school teacher to stand upon that she may plainly see her duty. She will find the field full of specimens which need much care, but which will give excellent returns. She will be able to confer lasting benefits upon those who pass under her observing eye.









Date: _____

